

71. Glass substrate carrying a coating stack in accordance with claim 70, in which the coating stack further comprises:

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a second metallic coating layer selected from the group consisting of silver and silver alloys; and

Cont. a third non-absorbent transparent coating layer comprising a layer of a partially but not totally oxidized combination of at least two metals. - -

REMARKS

Claims 25-71 are pending in this application. (See the next paragraph). The allowability of claims 25-51 is noted with appreciation. Applicants thank the Examiner for the thorough search and analysis as reflected in the Office Action.

The Applicants wish to apologize for the clerical error in numbering the claims. To avoid any error in the dependency of the claims, it is to be noted that claims 62-68 (as kindly re-numbered by the Examiner) should depend from re-numbered claim 61(which was originally incorrectly numbered as claim 62). Applicants proffer to submit a clean set of re-numbered claims 62-68 if that would be of assistance.

The rejections of record will now be addressed in the sequence in which these rejections appear in the Office Action.

1. The rejection of claims 52-59 (as renumbered) as anticipated by U.S. Patent No. 5,584,902 (Hartig et al) is respectfully traversed.

Claim 52 is an independent claim which refers to a glass substrate carrying a coating stack which comprises three layers in the order or sequence set forth in the claim, wherein the first and third layer are each "a non-absorbent transparent coating layer comprising a layer of a partially but not totally oxidized combination of at least two metals...".

The Hartig et al reference relates to a transparent substrate carrying a coating stack having two non-absorbent transparent dielectric coating layers in which each of the dielectric coating layers comprises a sub-layer of nickel or nichrome. Hartig et al always refers to the

sub-layer which is based on a combination of two metals (nickel and chrome) in terms of a metallic alloy – nichrome --. Hartig et al never discloses that the nichrome should be “partially but not totally oxidized”.

The last paragraph of page 3 of the Office Action is interpreted as suggesting that following the method described by Hartig et al would inherently provide “partially but not totally oxidized” nichrome. This would not be correct, as demonstrated by the following explanation.

Hartig et al discloses sputtering the nichrome and silver layers in the same zone of the coater, in an atmosphere which is either 100% argon or may consist of about 95% argon and about 5% oxygen. It is known in the art of sputter deposited coatings that when depositing a reflective silver metal layer it can sometimes be advantageous to include 1-5% oxygen in the sputtering chamber. Filed concurrently is a copy of a French Patent FR2430986 together with an on-line English language abstract. (The translation was not generated for on or behalf of Applicants.) However, in this case a metal silver layer is deposited despite the presence of this small oxygen “contamination” (indeed, if the silver was oxidised the coating stack would not have the desired performance). The suggestion of Hartig et al that his metallic nickel or nichrome layers may be deposited in 95% argon 5% oxygen is simply a way of expressing that these metallic barriers are deposited in the same gas mixture as that used to deposit the metallic silver layer. However, this argon/oxygen gas mixture results a metallic silver layer being deposited in the same way a metallic nickel or nichrome layer would be deposited.

As Hartig et al does not disclose a partially oxidised layer of nichrome and as by following the teaching of Hartig et al the skilled addressee would not inevitably deposit a partially oxidised nichrome layer, present claims 52-59 are not anticipated (expressly or

inherently) by U.S. Patent No. 5,584,902 to Hartig et al. Accordingly, the rejection of independent claim 52, and the claims which depend therefrom, is respectfully traversed.

2. The rejection of claims 60 (as renumbered) and 69 as unpatentable over U.S. Patent No. 5,584,902 (Hartig et al) in view of U.S. Patent No. 5,965,246 (Guiselin et al) is respectfully traversed.

Each of claims 60 and 69 refer to a “...layer of a partially but not totally oxidized ...”. As hereinabove discussed, Hartig et al does not disclose, teach or even suggest to partially but not totally oxidise the nichrome layers. The teaching of Hartig et al relates to the thickness of the nickel or nichrome layers and the ratio between their thickness.

Similarly, Guiselin et al does not teach nor suggest to have in the dielectric layers a sub-layer of a partially but not totally oxidised combination of at least two metals. The invention of Guiselin et al relates to an interlayer positioned between the substrate and the stack, and having a refractive index less than that of the substrate.

Since neither of the references alone or in combination disclose, suggest or teach a “...layer of a partially but not totally oxidized ...”, the rejection is believed to be improper and is accordingly traversed.

3. The rejection of claims 61-68 (as renumbered) as unpatentable over U.S. Patent No. 5,584,902 (Hartig et al) is respectfully traversed.

Claim 61, an independent claim, refers, *inter alia*, to various non-absorbent transparent coating layers, each “...comprising a layer of a partially but not totally oxidized combination of at least two metals...”.

As detailed above, Hartig et al does not disclose, suggest, or teach non-absorbent transparent coating “...comprising a layer of a partially but not totally oxidized combination

of at least two metals...". Hartig et al does not suggest partially but not totally oxidized layers of nichrome. Accordingly, the rejection of claim 61 is respectfully traversed.

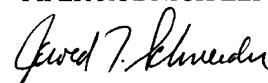
Claims 62-68 (as renumbered) depend from claim 61 and are submitted to be allowable for the same reasons.

CONCLUSION

Based on the foregoing, reconsideration and allowance of all claims is respectfully requested. Should the Examiner be of the opinion that a conference would expedite the prosecution of this application, the Examiner is encouraged to call Applicants' attorney at the following telephone number.

Respectfully submitted,

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